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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,337	08/21/2003	Hans-Peter Kampfer	22639	7597

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EXAMINER

REIFSNYDER, DAVID A

ART UNIT	PAPER NUMBER
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1723

MAIL DATE	DELIVERY MODE
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09/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/645,337

Applicant(s)

KAMPFER, HANS-PETER

Examiner

David A. Reifsnnyder

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/21/03 ; 8/22/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings filed on August 21, 2003 are objected to for being clearly informal. In response to this office action, **Formal Drawings are Required**. The requirement for Formal Drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1; the recitation of "the output chambers" lacks antecedent basis, because a pair of end chambers, not output chambers was previously claimed. Furthermore, the recitation of "a layer of low-friction durable material coating outer surfaces of the hydrocyclones in the central chamber" is vague and indefinite as to exactly what the applicant means to claim. Is the applicant intending to claim that a coated layer of low-friction durable material is provided on outer surfaces of the hydrocyclones in the central chamber?

Regarding claims 7-10, the recitation of "the outer surface" in claims 7-10 lacks antecedent basis because claim 1 claims "outer surfaces" not --outer surface--.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wikadahl.

Regarding claims 1-10; Wikadahl discloses a hydrocyclone separating apparatus (Fig. 2) comprising a housing (11) subdivided into a central chamber (2) provided with an input port (17) and a pair of end chambers (6,7) having respective outlet ports (18, 19); a plurality of hydrocyclones (1) extending across the central chamber (2) between the end chambers (6,7), the hydrocyclones each having an intake (3) in the central chamber (2) and an end output (5, 4) in each of the end chambers (6,7), whereby a fluid mixture pumped via the input port (17) into the central chamber (2) is separated by the hydrocyclones (1) into a light fraction exiting the outlet port (18) and a heavy fraction (7)

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exiting the outlet port (19); and the hydrocyclones are made out materials such as polytetrafluoroethylene or plastic (col. 12. lines 13-31).

Regarding claims 1-10; Wikadahl discloses the claimed invention except for the polytetrafluoroethylene or plastic being coated on outer surfaces of the hydrocyclones. It is considered that it would have been obvious to one having ordinary skill in the art at the time the invention was made for Wikadahl to have made his hydrocyclones out of metal, and then coat the metal with polytetrafluoroethylene or plastic so that the hydrocyclones are stronger as well as cheaper to make. Furthermore, coating metal with polytetrafluoroethylene and plastic was well known in the art at the time of the invention. Lastly, regarding claims 7-10, it is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention that the metal be rough so that the polytetrafluoroethylene or plastic coating adheres properly to the metal.

Prior art of record


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gould et al. who discloses a hydrocyclone separating apparatus (Fig. 1) comprising a housing subdivided into a central chamber provided with an input port and a pair of end chambers having respective outlet ports; and a plurality of hydrocyclones extending across the central chamber between the end chambers, the hydrocyclone each having an intake in the central chamber and an end output in each of the end chambers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Reifsnyder whose telephone number is (571) 272-1145. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


David A Reifsnyder
Primary Examiner
Art Unit 1723

DAR